Winter

AIRSLetter '97

The AIRSLetter is a quarterly publication produced by the United States Environmental Protection Agency, Office of Air Quality Planning & Standards, Information Transfer & Program Integration Division. It is intended to provide information and emerging issues related to the Aerometric Information Retrieval System (AIRS).

What's Inside!!

Click on the trolley to find the 1998 AIRS Conference Registration Form!

AIRS Conference Information Available

by Jerry Husketh

The 9th annual AIRS Conference will be held April 27-May 1, 1998 in San Francisco, CA. The hotel site for this meeting is the Holiday Inn Golden Gateway, 1500 Van Ness Ave. The Hotel reservations phone number is 415/441-4000. Room rates (both single and double occupancy) will be at the government per diem (Currently $114 tax inclusive).

Meeting room arrangements for 300 people have been made. However, because April is such a popular time to visit San Francisco, we were only able to reserve 200 sleeping rooms at the Holiday Inn. An additional 100 rooms have been reserved at the federal per diem rate (tax inclusive): fifty (50) rooms at the Cathedral Hill, 1101 Van Ness Avenue (415/776-8200) and fifty (50) rooms at the Hotel Richelieu, 1050 Van Ness Avenue (415/673-4711). These hotels are approximately three blocks from the Holiday Inn. I suggest you make your hotel arrangements as early as possible if on-site accommodations are important to you. Also, these hotels will honor these rates for both incoming and outgoing weekends.

A draft agenda and conference registration form are available from the AIRS Home Page. Be sure you mail or fax the registration form to me.

This year's conference (as always) will place heavy emphasis on state and local agency participation. Presentations by active state and local agency users of the AIRS subsystems will be sought to encourage sharing of ideas and products.

Ideas for presentations, special meeting topics, general suggestions, etc. are always welcome. Please Mail them to:

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Hope to see you in San Francisco.

"Data Quality & Data Integration" '98 AIRS Conference Theme

by Mark Antell, OECA

Let's call FY '98 "The Year of Data Quality & Data Integration". And to emphasize this, we'd like to make data quality and data integration the conference theme. Certainly, substantial effort will be expended this year in reviewing existing data, and ensuring that publicly accessible information is correct and complete. But often times, we also need to examine past practices, and search out ways to glean the same information with less effort. It's called simplification.

Simplification can be especially important when dealing with the volumes of information that cross our desks annually. Significant Violator tracking is a case in point where less may be better, and we're working on simplified methods of identifying and tracking SV histories which will make reporting, identifying, and standardizing violation comparisons easier.

Is the plural of caucus "cauci"?

Presentations are informative, and a good way to disseminate basic principles quickly. But often, old-fashioned human interaction is the fuel to future improvements. Past input has shown that you'd like to see more caucuses. After all, you traveled all that way, and it's important to hear what your peers have been up to.

Pick up that phone!

We'd like your input on other improvements or enhancements to the conference, too. We'll be contacting all the Regional compliance managers for their suggestions. They're the best line of communication to use to tell us what you see as most productive or needed. Why not give them a call?

Priority Zero (Weekend Shift) & NCC's Batch Job Class Redefinition

by Chuck Isbell

You may have noticed that on October 1, 1997, the IBM mainframe batch job classes were redefined. The change was made to give customers cost savings on their batch jobs, increase flexibility in scheduling when their batch job will execute, and to conform with the new Working Capital Fund method of billing for batch jobs.

Before October 1, a batch job's execution class was determined by the amount of CPU time specified for the job (TIME = parameter) and the priority (PRTY= parameter) on the JCL JOB card. This has not changed. However, under the new structure, jobs will be billed based on **when they execute** rather than simply on the job execution class. The National Computer Center (NCC) has divided the week into shifts or zones which determines the billing rate and restricts certain priority jobs to specific shifts. For example, batch jobs that execute as priority 2 will be billed at the following rates:

Prime Shift (Monday - Friday; 7 AM - 7 PM) $488.83 per hour
Off-Prime/Overnight Shift (Monday - Thursday; 7 PM - 7 AM) $244.50 per hour
Weekend Shift (7 PM Friday - 7 AM Monday) $85.10

Note that a priority 2 job now costs **half** the prime shift rate when that job executes during the off-prime/overnight shift. (Before only jobs submitted as priority 1 (overnight) would have been charged the cheaper rate.) Note . . . real savings can be achieved by running your job during the weekend shift. Weekend jobs only costs **one-forth** the prime shift rate. (Before the rates were the same for weekend and overnight jobs.) Under this new structure priority 1 jobs only begin execution during the off-prime/overnight shift.

This is where the **new priority 0 (zero)** comes into the picture. By specifying priority 0 on your batch jobs you automatically place your batch job in the weekend queue. This means your batch job will not begin execution until the weekend shift begins. So what are we doing to enable you to use the new priority 0 code in your batch jobs? Well . . . we're modifying the AFS batch submittal screens to accept "0" as a valid

Continued from "Priority Zero and NCC Job Class Redefinitions" - Page 2
priority code. This enhancement is currently underway and is expected to go into production during January. Due to the re-engineering effort, the current AQS is not being modified to support "0".

For additional information on NCC's new batch job class redefinition, please reference the NCC Memo #1052 "IBM Batch Job Class Redefinition." This memo can be referenced by choosing option 2 "Memo Facility" on the initial logon screen to the NCC mainframe. You may also call the NCC User Support Helpline at 1-800-334-2405 or (919) 541-7862.

EPA's WebWorld'98 Conference

by Chuck Isbell

In December, EPA had its WebWorld'98 Conference at the Renaissance Hotel in Washington, DC. You may recall that the Renaissance is where the AIRS Conference was held last April. The WebWorld conference began on Tuesday (12/2) and went until noon on Thursday (12/4). The theme this year was "Realizing the Vision." The WebWorld Conference, like our AIRS Conference, was very informative. I am enclosing a few of the many "points of interest" from the keynote speaker Gus Venditto, editor-in-chief of INTERNET WORLD magazine, and Al Pesachowitz, Acting Assistant Administrator for the Office of Administration and Resource Management & EPA's Chief Information Officer.

Here are a few of Al's key points from his presentation entitled "Are We There Yet?"

* Data Quality is becoming a larger issue since the web is making our data much more visible,
* EPA Home Page had 25 million hits Oct. '97 vs 5 million Jan. '96,
* Al cited the NAAQS as an excellent example for the use of EPA's web,
* Security on the web is essential,
* Electronic digital signature is essential,
* Al had these points on the integration of environmental data and EPA's Re-inventing Environmental Information (REI) initiatives and data standards,
    - > Get all States involved,
    - > Develop national data standards and an EPA Data Registry System,
    - > Support & encourage electronic reporting for all data reported to EPA,
    - > Re-engineer major EPA systems to be compliant with REI initiatives and data standards,
* Al praised all the work that EPA folks have put into the EPA Home Page,
* Al concluded with this challenge to EPA folks: Think about what our customers want and need from EPA - then think about data quality, security, etc.

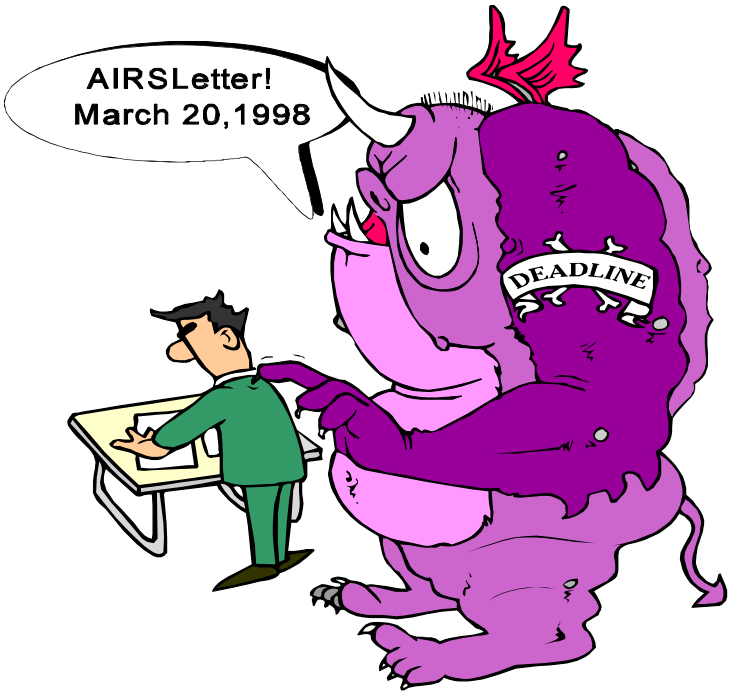
Gus Venditto had these keynotes:

* Americans can take pride in this network (Internet) that connects all the computer together,
* Virtually every new home PC has a modem & Internet connectivity,
* Corporations are shifting from LANs to Intranets,
* Currently >200 million web pages,
* Internet advertising - $301 million in '97 vs estimated $7.7 billion in 2002,
* What the browsing public expects today of your web site/page:
    - > Simple, concise statements,
    - > Clear description of what you offer,
    - > Clear directions on what to do next,
    - > No wait time,
    - > Expect you to keep hardware up-to-date & maintain capacity,
* What the browsing public wants tomorrow:
    - > Animation (animated GIFs, Java Script calling GIFs & Java)
    - > Multimedia (real audio, quick time MOV or Microsoft AVI)
    - > Inter-activity (E-mail, Java Script, Java, dynamic HTML layers, push channels, Microsoft CDF and Netscape Netcaster).

AIRSLetter Deadline for Spring Edition Set

by Jonathan Miller

As you all may be aware, the AIRSLetter is a quarterly publication written, edited, and distributed by the IMG of the USEPA. Readers are encouraged to submit articles for publication on any relevant topic. If you would like to send in an article for the Spring edition of the **AIRSLetter**, please send your file via e-mail to miller.jonathan@epamail.epa.gov. Most word processing formats are acceptable. As always, the editor (that's me) reserves the right to make editorial changes. Please submit your articles by **Friday, March 20, 1998.**



AQS News

AQS Re-engineering Status and Plans

by Jake Summers

As the months go by and we understand the magnitude of our project better, we continue to adjust our schedule to meet the reality of the work load. The schedule announced at the last AIRS Conference was an ambitious, but now it appears unrealistic as we progress in the project we continue to learn about development in Oracle and the many updates and changes in technology. As with the development of AIRS in the ADABAS environment, we continue to identify new requirements that must be supported in the UNIX environment in order to implement our system. We strive to provide a system that will not cause interruptions in data reporting to meet the reporting for new regulations such as the new NAAQS and to continue existing capabilities that users have taken for granted.

With your support, we are continuing with the design and development of this new system. Since there are several products associated with this effort, I would like to take this opportunity to discuss the current status of each.

Prototype — The small prototype was developed to demonstrate the proposed user interface for specific client functions in the new system. Over 75 users volunteered to test this prototype. This testing has been completed and is discussed in more detail in a separate article by Bonnie.

Interim Database — This database was reloaded during the weekend of November 8 and contains all the data from AQS for sites and monitors, 15 years of annual summary and daily raw data, hourly data for 1993 - 1997, and many reference tables. The 8-hour running average values for the new ozone standard will be available in the future, after validation of the calculations has been completed. Other data is available for access through the query portion of AIRSWEB (See article by Jonathan).

Beta Testing — This process will not begin until after the AIRS Conference in April. This beta testing will help ensure that the end-user can function effectively with this new client software from his or her desktop, as well as identify any bugs that may exist in this Beta version.

Production — Actual production is scheduled for September 1998. Details on training have not been finalized. Tentative plans include hands on training being presented at each Regional Office in the July - September time. Undoubtably, we will also have more conversion issues to deal with to convert over all of the appropriate data from the existing AQS into the production data base (see page 8). After the production database is implemented, the interim and prototype data bases will no longer be supported since we will be in an operational mode. The client software and the WWW access for the public will access the production data base.

In summary, we certainly have our work cut out for us. From a hardware/software requirement standpoint, things keep changing as more decisions are made by us and by the EPA folks in the Enterprise Technology Services Division who operate the NCC. Please don't hesitate to call any of us on the AQS re-engineering Team for more information.

Delimited Format of Raw Data Types Defined for New AQS

by Jonathan Miller

Draft versions of the new input formats for the three of the raw data types have been developed. The format for all three types of raw data (hourly, daily and sub-hourly data) are the same. However, the field lengths and requirements differ slightly from data type to data type. Here are some very important differences between the new formats and the existing data formats:

1) **The formats are DELIMITED:** Due to the possible fluctuations in the field lengths, the ART Update team decided to implement a delimited format for the data. The delimiter chosen has been the pipe delimiter ("|"). By using a delimited format, this provides great flexibility in any future changes to any lengths of the fields. For example, the data dictionary team implemented a change to the length of the POC code to be a maximum length of 2 (increased from 1). Under the scenario of fixed position transactions, all fields would be shifted one position to the right to accommodate the new field length. Not only would our software need to change to interpret the new format, but the state and local agencies would also need to modify their software to produce the new formats. For the delimited file, there would be no impact, since it is the order in which the fields appear is what is important, rather than the field lengths.

2) **"Modify" is now "Update":** As with any transition to a new platform, the terminology does change. In "ORACLEWorld", what we think of currently as a "Modify" (**modify** the value of an existing field to a new value) is now called "Update" (**update** the value of an existing field to a new value). The action code is "U".

3) **Change in some field lengths:** POC, Interval, and sampling frequency all added codes which expanded their lengths to a maximum of 2 characters. The "Null Data Reason Code" has been moved to a completely separate field and has new 2-character codes as well. The new list of Null Data Reason Codes can be found on the AIRSWeb - Query (reference table = Null Data Reason Codes)

Keep in mind that these draft formats pertain to only the **RH - Hourly Raw Data** (Sampling intervals no less than 1 hour, no greater than 23 Hours), **RD - Daily Raw Data** (sampling intervals of 24 hours and greater), and **RS - Sub-Hourly Raw Data** (sampling intervals of less than one hour) types. The format is as follows:

Field Name	Minimum Length*	Maximum Length*	Comments
Format Type[R]	2	2	RH, RD, or RS
Action Code[R]	1	1	I, U, D
State[R]	2	2	FIPS State Code
County[R]	3	3	FIPS County Code
Site[R]	4	4	AIRS Site ID
Parameter Code[R]	5	5	
POC[R]	1	2	New Max Field length
Start Date[R]	8	8	YYYYMMDD format
Start Hour[R]	1	5	hh format (0 - 23 valid)
Start Minute[R]	Null	2	Type "RS" Only mm format (Null, 0 - 59 valid)
Interval[R(I, U)]	1	2	New Max Field length
Method[R(I, U)]	3	3	
Unit[R(I, U)]	3	3	
Sample Value[X(I, U)]	1	11	5.5 format
Validity Flag	Null	2	
Null Data Code[X(I, U)]	Null	2	New Codes
Sampling Frequency	Null	2	Valid only with type "RD"

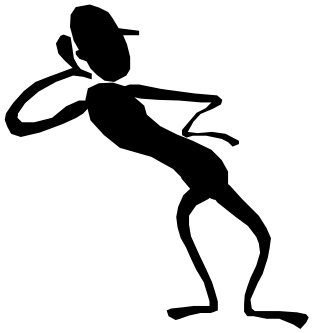
R - Required
R(I, U) - Required on Insert and Update
X(I, U) - One of the two must, but not both, be valued for an insert or a modify

Continued from "Delimited Format of Raw Data Types Defined" - Page 6

As soon as the data modeling effort is complete and we receive comments from the Technical Advisory Group, the raw data input formats will be finalized. In the meantime, we will be developing the input formats for the Site, Monitor, Precision, Accuracy, Annual Summary, and all related tables. The draft versions of these input formats will be made available on the AIRS Home Page. Please call Jonathan Miller at (919) 541-3330 if you have any questions.

AQS Prototype Wrap-up

By Bonnie Johnson



Feedback was received from about 1/3 of the volunteer testers of the Prototype for the Re-engineered AQS. Some of the volunteers are still working to get the necessary hardware and software to participate, but most were able to get started. The active testing with the Prototype has ended. I've talked to many of the testers and I think all of those who participated found it worthwhile -- if only to get setup!

Here's a summary of the feedback we received:

Installation: Most testers breezed through the installation. There are a few differences between the Win95 and WinNT versions we need to work out but that's about it. If you have panic attacks at the thought of installing new software, this should be welcome news.

Connecting to the database: For some testers, the connection was so easy, they weren't sure they had made it; for others, getting through a firewall was a problem. Many of you commented on the lack of a "splash" screen to confirm to you that you were indeed online and connected. Well, there *was* a splash screen of sorts using a picture I created. I didn't like it, had it removed and simply didn't take the time to create a new one. Rest assured that the final product will include a splash screen.

Display: We heard comments from the screen colors being "*too blah*" to "*very professional*". The plans for the final implementation are to use the default Windows colors. This means that the colors you see will depend on the Appearance settings you choose in Display Properties from the Control Panel.

The display is being designed for a minimum resolution of 800 X 600 pixels and 16 simultaneous colors. We will try to make the display look "right" at higher standards as well since many users are purchasing new hardware that provides greater resolution and more colors. Windows will appear full size by default but if you use a lower resolution, such as 640 X 480, you may have to scroll to see the entire window.

Navigation: The tool bar and menu were very limited on the Prototype. Some options on the toolbar were "grayed out" when they were actually useable. The cursor didn't always change to the appropriate icon, such as a pointer instead of the "I" bar. The Tab key didn't function as expected. There were no right button mouse functions. There should be more shortcuts and keyboard support. These are all items we intend to expand on or correct in the final package. We also heard that directions within the screens were helpful in determining the next step.

On-line Help & Error Messages: It is our fervent hope that Oracle error messages will never appear on your screen while you are using the new software. The Prototype had very limited online help and error handling. The plans for the final product include help at several levels and friendly error messages -- if an error message can ever be friendly! A few people noticed the lack of beeps. This is a feature that will be added in the final product, but only when we want to be sure you notice something.

List Boxes: Requests were made for more "smart" list boxes, e.g., make the list of AQCR's for only those within the selected state and county. It was also noted that the response time for the population of list boxes was sometimes slow, especially during heavy Internet traffic. We are considering the pros and cons of including some lists in the client software. Decisions will be made field by field, depending on the length of the list and its volatility.

Continued from "AQS Prototype Wrap-Up" - Page 7

Canceling Actions: This is an area we are investigating. It is the nature of this type of application that clients are sometimes hung while an action is being taken at the server. When your PC is not being queried for a response, it is sometimes difficult for an application to immediately recognize your keyboard/mouse input. We will do our best to minimize this situation.

Waits: Progress indicators need improvement. If we cannot show a "% Complete", we will at least try to show you that it's working.

Response Time: This was really interesting. We got comments ranging from *"… this system is so slow, it concerns me a lot*" to "…*it beats the old mainframe system hands-down*". Generally, testers within the EPA network had the better response times, but others also reported good response times. Response time is one of those things that vary so widely that it is difficult to evaluate generally. We will work for improvements.

Printing: No effort was made for printing in the Prototype beyond that provided by Windows. Obviously, this will change in the final product. The plans call for local as well as remote printing (for large printouts.)

Discoverer 3: Discoverer is a tool from Oracle Corp. we plan to use for ad hoc queries. So far, a goodly number of testers have been unable to run a query using this tool. Version 3.0.7 was used with the Prototype. The current version is 3.0.8 but this newer version does not resolve the problem. Oracle Corp. is working on a patch that may fix it. A totally newer version is expected within the next few months. It is in Oracle's best interests to solve this problem and we anticipate that they will.

Well, that's the summarized version of the comments and results we saw with the Prototype. This was only the tip of the iceberg, but we got some valuable information and I think the testers got some, too. The contractor working on the final product has been given a copy of all the feedback we received. If you have additional comments, please send them to me at johnson.bonnie@epamail.epa.gov. Again, thanks to all those who participated.

Query Portion of AIRSWEB Operational

by Jonathan Miller

After much anticipation, the Query portion of AIRSWEB became operational in early December. This new utility allows direct access to the data tables that are summarized by the Air Quality portion of AIRSWEB.

Special features of this product include:

- Selection of "categories" of pollutants:
  - Criteria Pollutants
  - PAMS Pollutants
  - Pollutants on the "HAPS" list
  - Meteorologic Parameters
  - Other Pollutants (selected from a drop-down list box)
- Selection of running 8-hour ozone averages
- "Drill Down" to related tables (From Site to Monitor to Annual Summary to Raw Data for example)
- Download results of data queries in ASCII text (*.txt) formats

We hope to soon implement the "Batch" capability for this product. This would allow anyone to download any of the raw data from AIRS AQS. Since this is a batch process, the generated files would be created overnight (due to the potentially large nature of the data), and would remain on a public access server for 3 days waiting to be downloaded. The batch software is a new piece of software purchased by the agency, so we are still working out a few problems with how our software interfaces with it. As soon as it becomes available, we will post a message on the AIRS log in screen as well as place notices on the AIRS Home Page and on AIRSWEB. We are continually striving to improve AIRSWEB and would be very interested in your comments. So sign onto www.epa.gov/AIRSWeb, click on "Query", and let us know what you think!

Memo For Data Quality Review Issued

by Ed Hanks, Monitoring and Quality Assurance Group, USEPA

The following text is taken in part from the 11/21/97 William F. Hunt, Jr. (OAQPS/EMAD Director) memorandum to Regional Division Directors:

"As we get nearer to the implementation date of the AIRS Re-engineering effort it is still apparent that many State/local agencies are not making use of some of the tools already available for ensuring the quality of the AIRS data. The Re-engineered AIRS has been planned to allow for State/local agency instant data update. Since September 1995 the SCAN report (AMP120) has been available for users who enter data on the AIRS Air Quality Subsystem (AQS). This report allows reporting organizations to quickly view any new data, in the screening file format, and perform a final quality assurance (QA) check to determine any data anomalies prior to locking the data for the weekly updating. The AMP120 report rank orders all the observations in descending order, and also compares the first four high values with the historical maximum at that site for the current plus the previous 3 years. The report is available as option report #25 under the Standard Batch Reports option from the AQS Main Menu. The following conditions must apply prior to running the program:

1) You can only scan screening files that you have access to.
2) You must select the screening file you want to scan prior to submitting the report.
3) At least one transaction in the screening file must be at edit level 3 (passing all edit levels).

The AMP120 report was designed, for both current and the re-engineered AIRS, to be utilized as a final QA check tool prior to data submittal to AIRS. This association, instant update and AMP 120 report QA check, is necessary if the AIRS data quality is to be maintained. It seems likely, at this point, that this final QA check is currently being ignored by the QA Officer at many State/local agencies. Many of the errors which OAQPS/EMAD have identified in the past and continue to identify, could have been avoided had this program been run and the errors corrected prior to submittal. OAQPS/EMAD has been continuing to screen weekly data updates at EPA headquarters, however this screening process will not be possible after the effective date of the re-engineered AIRS and the instant up-date process is implemented. In order to continue with the reporting of high quality AIRS data, the Regional QA Officer should review the reporting organizations QA plan and request that this last QA step, by the reporting organization's QA Officer, be incorporated into the QA plan and implemented immediately. EPA feels that a reporting organization demonstration of compliance in the use of the AMP120 report is necessary prior to the final implementation of the re-engineered AIRS.

By this memorandum EPA strongly advises all reporting organizations on the necessity of utilizing the AMP120 report as a last QA/QC review check prior to submittal of AIRS data. Therefore EPA requests that Regional QA Officers work with the reporting organizations to ensure that each State/local QA Officer be responsible for implementing this final AIRS AMP120 review procedure that is necessary to ensure the best possible error free quality of AIRS data submittals for the present and future.

If you have question regarding this memorandum please contact David Lutz at (919) 541-5476 or Ed Hanks at (919) 541-5475. If you have any questions concerning the AMP120 report, please refer to AIRS Volume AQ3-Data Storage Manual or call Jonathan Miller at (919) 541-3330 or Michael Hamlin at (919) 541-5232."

Discoverer Training to be Given at AIRS Conference

by Jake Summers

As with other conferences, training will be offered on Monday (April 27). This year, the same AQS training class will be split into two sessions to provide an opportunity for more participants. The re-engineered system will rely heavily on Discoverer 3 which is the Oracle ad hoc query tool. This tool is very powerful and is expected to be used for browse capabilities as well as some routine batch reports. The training will discuss the capabilities of Discoverer 3 and will be demonstrated using the interim data base. Because this tool will be very important for the beta testing and the new system, please plan to attend and register for one of these sessions when you register for the conference so we will have enough training material available. Also, please indicate which session that you prefer to attend. The material covered in both sessions is identical.

Oracle Discoverer 3 Patch and Other Hardware/Software

By Bonnie Johnson

We plan to use the Oracle end user tool called Discoverer 3 for ad hoc queries in the Re-engineered AQS. Those of you who have been participating in the testing are aware of a problem with the use of this tool over the Internet. Sometimes it works; sometimes it doesn't! The symptoms of the problem seem to point to heavy traffic on the Internet interfering with the response. Oracle has been aware of the problem since the first of October and just released another version of the tool that is supposed to fix this problem as well as some others that haven't affected us. At press time, I've been unable to test sufficiently to determine whether or not the problem is solved. But, if there is still a problem, Oracle will continue working to solve it. Oracle has big plans for this product, including the release of a Web version early next year.

Assuming that Discoverer will work as promised for our project, I'd like to reiterate the recommended hardware and software that will be needed for the Re-engineered AQS.

Pentium 120 or higher (But with prices down, why buy anything less than 166MHz?)
Windows 95 with 24MB of RAM - or- Windows NT 4.0 or later with 32MB of RAM
SVGA with 256 colors
Mouse
CD ROM
80 to 180 MB Disk Space (Discoverer 3 takes approx. 60MB to install. AQS client software will start at about 10MB and grow. Additional space will be needed for files you create.)
Internet connection with a browser (e.g., Netscape)
Oracle Discoverer*

I've checked PC prices for configurations that exceed those listed above and found prices ranging from $1099 for a 166MHz Pentium to $2499 for a 300MHz Pentium II with a 17" monitor, 64MB SDRAM, and a 6.4GB Ultra DMA Hard Drive.

If you received a copy of Discoverer 3 from EPA as part of the testing group and you are still a part of that group; you will receive an upgrade when it is working properly over the Internet. For budgeting purposes, you should be aware that our agreement included support for 1 year. Assuming Discoverer remains the tool of choice for ad hoc queries, you should plan on buying support from Oracle at approximately $250/year. This support entitles you to "free" upgrades to the product as well as technical support.

If you have questions about Discoverer or the requirements for the new AQS, feel free to email me at johnson.bonnie@epamail.epa.gov.

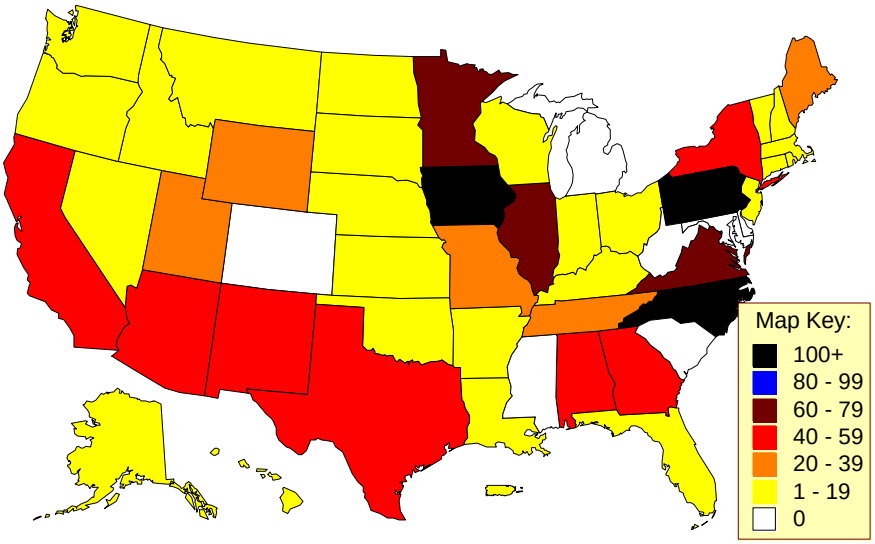
*** PLEASE NOTE:** Oracle Discoverer 3 is currently priced at $995, but I understand you can get a discount for a government purchase. (You may want to wait until we're closer to implementation and the kinks with Discoverer are worked out before purchasing it.)

Blank "Land Use" Code Problematic for New AQS

by Jonathan Miller

When we convert data from the mainframe to the new AQS environment, fields that are defined as "required" will always need to be populated in order for ORACLE to be able to write the record. We are continually evaluating these required fields and the potential problems that we may encounter during the final data conversion next September. Today's discussion pertains to the "Land Use" field on the site record.

The land use code provides subjective information of the site's surroundings. Examples of land use include (but is not limited to): RESIDENTIAL, COMMERCIAL, INDUSTRIAL, AGRICULTURAL, and FOREST. Currently, there are over 1,800 sites in the data base that do not have any entry for this field. For conversion purposes, if this field has not been populated, we will assign a new code of "UNKNOWN LAND USE". We would much prefer that this information be provided where known. We understand that there will be situations where determining the land use would be very difficult (if the site closed several years ago, for example). Consequently, we are encouraging that you populate this field where you can, and "UNKNOWN" will be displayed for those sites where it cannot be determined. Please keep in mind that "UNKNOWN" will not be a valid entry for new sites. This is strictly for the purposes of data conversion.



To the left is a map showing the "land use status" for each state. Congratulations to Colorado, Delaware, District of Columbia, Maryland, Michigan, Mississippi, South Carolina, and West Virginia! These states have the land use field populated for every site in the data base! In fact, 66% of the states have 20 or fewer sites to populate. So, hopefully, this will not be a significant effort. Please let me know if you have any questions.

Correct Usage of Monitor Type "U" Defined

by David Lutz, Monitoring and Quality Assurance Group, USEPA

There seems to be some confusion as to the exact intent of the monitor type "U" code. The monitor type code "U" for PAMS is only intended as an interim measure to identify the PAMS parameters until they are officially approved and designated PAMS. The "U" code designation is not intended to be used to identify monitors that collect PAMS-like data. However, the "U" designation is appropriate for the collocated 24-hour sampling at a PAMS sites. It is not appropriate for other POC's for collocation or QA split samples when these POC's are really only PAMS-like and will never be a part of the official PAMS network. If you have any question regarding this matter please contact David Lutz at (919) 541-5476 or Ed Hanks at (919) 541-5475.

New Member Joins AQS Re-engineering Team

by Mike Letke

Mike Letke has joined ITPID's Information Management Group to work on the Outputs portion of the AQS re-engineering project. Mike is a computer specialist, who comes to the Environmental Protection Agency from the Internal Revenue Service. At IRS, he worked on several systems involving electronic exchange of data with the public. Prior to working at IRS, Mike worked for the National Institutes of Health, in Rockville, MD, as a Computer Programmer and Systems Analyst.

Originally from Baltimore, he has lived in Martinsburg, WV for the past 17 years. He is married to Kate Letke and has two daughters, Jesseca and Megan.

Mike can be reached by e-mail at "letke.michael@epamail.epa.gov" or by phone at (919) 541-0773.

Additional Information Required When Requesting New Parameter Codes

by Jonathan Miller

As we develop the re-engineered AQS, we are trying to incorporate as many relevant EPA data standards as possible. One of these standards pertain to the current "Parameter" table. The parameter table contains a list of all pollutants and meteorologic data parameters that AIRS is able to track. The EPA data standard recommends the use Chemical Abstract Service Numbers (CAS number), where possible, to track pollutants. Although we use a "Parameter code" as the key in our parameter table, we need to be able to reference the appropriate CAS number. So, if you are requesting a new parameter to be assigned into AIRS, we will need to know the CAS number to meet this data standard.

In addition to the CAS number, if you are requesting a new parameter code, we will need to know the number of Carbon atoms in the molecule and the compounds molecular weight. The number of carbons field is a new field that we will be utilizing in the new system in order to convert data between parts per billion - Carbon (unit code of "078") and parts per billion (unit code of "008") and/or parts per million (unit code of "007").

By supplying this information for us, your request to obtain a new parameter code can be processed more quickly.

New Validity Flag Created for Sahara Dust

by Jonathan Miller

A new validity flag code ("U") has been created to notate samples that have been affected by Sahara dust storms. This new validity flag carries all the same documentation requirements as the existing validity flags in order to be considered a "special event". The new flag can be used by any of the following parameters:

81102 (PM_{10} - Standard Temperature and Pressure)
85101 (PM_{10} - Local Temperature and Pressure)
81104 ($PM_{2.5}$ - Standard Temperature and Pressure)
88101 ($PM_{2.5}$ - Local Temperature and Pressure)

AFS News

AFS Accomplishments in 1997

by Chuck Isbell

In the past year, several enhancements have been initiated or fully incorporated into AFS aimed at both enhancing system functionality and ease of use. These accomplishments include:

1. **Year 2000** - To minimize the cost associated with incorporating full year 2000 support (e.g. a 4 digit year) into AFS and also minimize the impact on State and local agencies utilizing batch converters for AFS reporting, AFS will continue to support a 2 digit year. The year 2000 changes will focus on modifying AFS to internally recognize years of 2000 and beyond according to the "50 rule". The "50 rule" applies a century of "19" to all years YY greater than "50" and a century of "20" to all years YY less than or equal to "50". Utilizing this cost effective approach, none of the AFS batch transaction formats and user interface screens need to be modified. (See Lillian Bradley's article "YEAR 2000 PRE-NOTIFICATION USER MEMO.")

2. **Envirofacts Evaluation** - We recently evaluated the AFS capabilities at the EPA's Envirofacts site on the Internet and submitted recommendations for improving AFS retrievals currently supported as well as ideas for additional retrievals. Envirofacts is EPA's data warehouse of environmental information from EPA databases (Superfund sites, drinking water, toxic and air releases, hazardous waste, water discharge permits, and grants information) which is accessible to the public via the Internet (http://www.epa.gov/enviro/). It is envisioned that the Envirofacts site will allow individuals to perform their own Freedom of Information Act (FOIA) requests in many cases thereby reducing the burden on EPA, State and local agencies.

3. **Permits** - Enhancements to the Permit capabilities in AFS are being considered which are aimed at streamlining the data management capabilities associated with the federally reportable data elements.

4. **AFS Plant ID** - The Plant General update and browse screens are currently being modified to display the AFS Plant ID in addition to the NEDS and CDS ids.

5. **627 Plant Compliance Summary report** - The report was enhanced to list permit data in conjunction with compliance data currently supported. In addition, the selection criteria screens were enhanced to support field level help and additional selection and sort capabilities.

6. **Batch Improvements**

   - Enhanced Notify and Utility submittal screen functionality.
   - Incorporated some inter-transaction editing and look back features into the Edit software.
   - Incorporated several features consistent with the old batch functionality.
   - Implemented consistent Year of Record requirements into the Compare, Edit, Update software.
   - Improved Year of Increment/Decrement processing.
   - Eliminated miscellaneous bugs, many of which were reported via the AFS Help line.
   - Enhanced SV processing for days used to address calculations.
   - Provided centralized RACF administration.

Continued from "AFS Accomplishments in 1997" - Page 13

7. **Zero Priority Code** - Began incorporating the new zero priority code into the JCL submit software throughout AFS. This feature will allow AFS users to run reports and batch updates off peak at a reduced cost. (See my article entitled "Priority Zero and NCC's Batch Job Class Redefinition.")

8. **Toggle** - On-line update and browse software was enhanced to support toggling between update and browse screens by pressing the PF12 key. This feature is particularly useful in Multi-facility browse because records may be updated in the middle of a browse session without having to abort and restart the browse.

9. **Condensed Point/Segment Update** - A new update screen is being developed to allow users to add or update point general, segment general and segment pollutant information in a condensed format without utilizing the current update process. This streamlined data entry will assist in the rapid entry of mass amounts of emissions (criteria and HAP) data.

10. **Training** - 1997 was a big year for AFS training. Emissions, Compliance, and Permits with a primary focus on MACT and the Batch Update Software. Training was presented in all the Regional Offices (Regions 8 & 9 together) and in RTP, NC. (See Lillian Bradley's article on FY98 training "AFS Training Offered Nationwide").

AFS Training at the Conference

by Jerry Husketh

Again this year at the AIRS conference we will offer training on the AFS subsystem. On Monday, an all-day session with hands-on opportunity will be offered from 8:30 - to 4:00 that is similar in nature to the 3 day class normally given in the regional offices. Obviously it will be a condensed version and should be considered a "refresher" course. Also, on Monday we will offer the AFS General Overview session from 2 to 4 P.M. On Friday we plan to offer concurrent training sessions on Data Quality and Significant Violator Tracking from 8:30 to 12 noon. Be sure to indicate your preference on the registration form as seating may be limited on these.

Universal Compliance Interface System Project Update

by Mark Antell, OECA

Last FY, we developed a Universal Interface (UI) designed to accept State information system compliance data and report it to AFS. We announced it in the Fall '97 AIRSLetter, and discussed it's capabilities at that time. But how does it make your job easier? Glad you asked:

For one thing, the simplified input format makes your system's exportation logic simpler. For example, the plant general data that has to be entered on four separate AFS transaction sequence records is on one single UI record.

You don't need to build the sometimes complex data and relational edits into your exporter. You simply export all data available, and the UI will accept it all, review it, and tell you if codes or relations are in error.

Should there be any future changes to the AFS transaction formats, headquarters will have the UI altered to allow for them.

It can save you time. Since it operates on a local PC, it allows you to edit volumes of data immediately. AFS batch jobs that need over five minutes to process cause an overnight wait for results. Use of this interface reduces the number of file uploads you perform, since they undergo a quality check before you send them, not after.

It saves money. Running your data edits on a local PC eliminates mainframe CPU charges incurred with verifying your data will be accepted into AFS. Since CPU time is accounted for under working capital funds, the fewer jobs you run the more you save.

We're currently breaking in the software at three beta-sites. -Oklahoma, California's South Coast, and

Continued from "Universal Compliance Interface System Project Update" - Page 14
Arizona. We're discussing it's use with other States as well. It's even been used as an interface to AFS for the CFC tracking system developed last FY.

If your agency is currently in the planning stages of a new system, you owe it to yourself to take a look at what this software can do for you. Contact your Regional AFS Compliance Manager and ask for some further documentation.

Significant Violator Data Validation Utility Developed

by Mark Antell, OECA

This is a handy new utility you may want to consider looking over. It was designed to accept SV data extracted from AFS through ad hoc non-formatted reports. It contains general plant information (ID, address, SIC, government facility code, and current SV flag,) Air program pollutant information (air program code, pollutant code or CAS number, compliance status, class, and Attainment/Non-attainment indicator) and action data (action number, action type, air program code, date scheduled, date achieved, and penalty amount.)

It has a built in function to QA the three places in AFS which indicate compliance: SV flags, air program pollutant compliance status, and actions. It verifies that the three are complete and in agreement, and reports on anomalies.

It makes changes easy because it has an update function built in, and you can review all your plant, air program pollutant, and action data on one screen. It allows you to add and delete as well as change information. The new or changed data can then be submitted to AFS, because the utility even has a transaction generator that creates AFS format transactions for any new or altered records.

Like the Universal Interface, it has a simplified input format, and it could conceivably accept data from a local system.

The capabilities just mentioned have promise well beyond their use as a QA tool. As a matter of fact, it may have more uses than a Swiss army knife! If you are responsible for updating AFS compliance and enforcement information for your agency, it may be much easier for you to affect changes within this software, and submit the changes periodically to AFS. This reduces connectivity issues because you're not connected to AFS as often or as long.

If this software sounds like something you'd like to look into, call your Regional compliance manager, and ask them to help you learn more.

AIRS Facility Subsystem Training Offered Nationwide

By Lillian Bradley

Click Here for Detailed Training Agenda

IMG and OECA in a joint effort is sponsoring Regional AFS training this year. Each Regional office is being asked to organize and coordinate this training with all the emissions, compliance, permit, and air toxics contacts. The compliance contact for each Regional will serve as the training coordinator. Each Region has the option of time and date and can customize the training to suit their individual Regional needs. A detail training agenda is listed below.

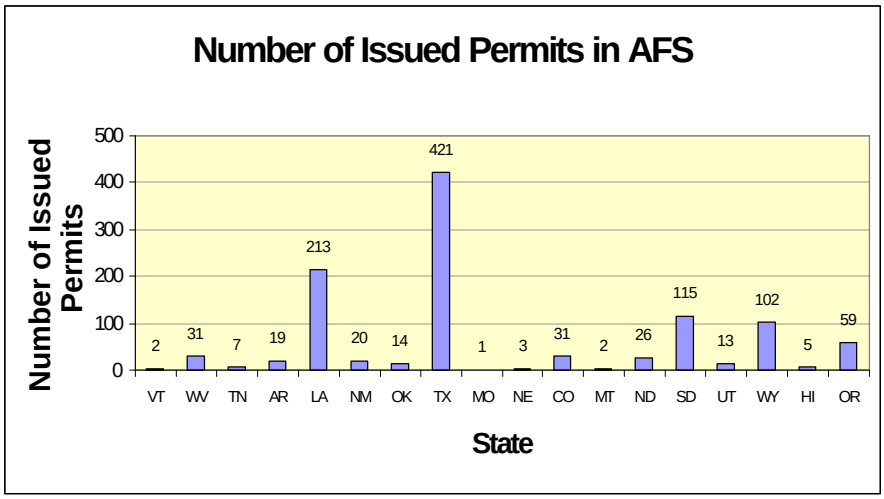
If you have questions concerning these training sessions please contact the following Regional Contacts:

Region 1	Stan Chin	(617) 565-3709	Region 6	Betsy Metcalf	(214) 665-7272
Region 2	Jim Nyemchek	(212) 637-4048	Region 7	Earlyne Hill	(913) 551-7617
Region 3	Betty Harris	(215) 566-2168	Region 8	Brenda Combs	(303) 312-6775
Region 4	Ahmed Amanulah	(404) 562-9209	Region 9	Linda Barajas	(415) 744-1181
Region 5	Debra Flowers	(312) 353-4410	Region 10	Laurie Kral	(206) 553-1868

STATUS OF TITLE V PERMIT DATA in AFS

by Bill Frietsche

Permit data reported to AFS for Title V continues to slowly improve. As of 11/17/97 the following States reporting issued permits:



Several other States reported draft permit data, but not have not yet issued permits. As of now, approximately ½ of the States are reporting some data. Our goal is better data quality in AFS for Title V.

Towards that end, we are working on the permit capabilities in AFS to address several software issues. In particular, we are revisiting how general permits should work in AFS, and the security routines for permitting authorities sharing the same county in a state.

OARM Questions Support for FINDS ID

by Bill Frietsche

We have received a memo from the EPA's Envirofacts Warehouse Team in EPA's Office of Administration and Resources Management (OARM) which proposes that the Facility Index System (FINDS) will no longer be supported after September 30, 1998. It is also proposed that FINDS will be replaced by the Facility Registry System. The subject of the memo is "FINDS and the Envirofacts Warehouse", and can be found at "www.epa.gov/airs/findsmem.pdf".

This memo asks each national system to identify their program needs regarding the FINDS system, and also asks if these needs must be met in the system which will replace FINDS.

As AFS system managers, however, we are not in a position to know all of the uses that our current FINDS functionality provides to our user community. We do know what the system provides to support FINDS IDs. AFS provides the following:

- AFS holds FINDS IDs for plant records;
- AFS plants can be accessed for browsing from the FINDS ID;
- the FINDS ID is included on several of the fixed format reports;
- Ad hoc retrievals can select and retrieve data using the FINDS ID;
- The Dun and Bradstreet numbers we store come from the FINDS system.

What we don't know is whether or not our users rely on these capabilities, and if so to what degree. So I am requesting that you read the memo and respond to Pat Garvey with a cc to me.

We would like to incorporate your comments and concerns into our response to OARM. The time frame for response to this memo is short, but we are interested in knowing the answer to this question. If you make use of the FINDS IDs in AFS, please let us know. If you have questions about this, please give me a call at (919) 541-5451 or send an E-mail (frietsche.bill@epamail.epa.gov). Thanks.

Year 2000 Pre-Notification

By Lillian Bradley

Introduction:

The Aerometric Information Retrieval System (AIRS) is EPA's national repository for air quality data, emissions, compliance and permit data collected by State and Local Agencies and the EPA. This memo presents the impacts of the century change on the AIRS database. Most AIRS software currently accepts only a two digit year field. Therefore, the processing of 21st century data within AIRS must be evaluated and the appropriate steps taken to support Year 2000 data.

A new EPA date standard is in place for data processing applications which will require that all EPA systems be Year 2000 compliant by providing system operations with a numeric calendar representation of CCYYMMDD. The difference is a 4 digit year field, CCYY (for century/year), instead of the current 2 digit field of just YY. Due to the extensive software and database modifications being planned for AIRS, AIRS is proposing an alternative interim solution in order to bring its subsystems and applications in compliance to the new standard.

Project Implementation by Subsystem

AIRS Facility Subsystem

The AFS is not fully Year 2000 compliant, although more recent enhancements, such as the permits module is compliant. Re-engineering AFS solely to be compliant with the new EPA date standard is not cost-effective at this time. In the interim, a simpler solution will be implemented to resolve the Year 2000 problem in AFS. AFS will retain its current 2 digit year externally but internally recognize the new century to provide the proper date computation and sorting. New software would accomplish this by editing the 2 digit year to determine which century applies. AFS software will be modified to implement the following rule:

> If the 2 digit year is greater than 50, assume the century is 19, otherwise, assume the century is 20. This is referred to as the '50' rule.

The '50' rule will allow AFS to retain the 2 digit year on the internal database files, the online screens, and the Fixed Format and Ad Hoc reports. Another benefit will be in leaving the 2 digit year on batch transaction formats. This will prevent States from having to modify their AFS converter software to support a 4 digit year format.

Some AFS modules already contain the ‘50' rule from the initial AFS implementation. The modules which still need to be modified in AFS deal with years used in computations, logical expressions, and sorting. These include:

- Update & Browse modules that deal with security of compliance actions and validations for date fields.
- Fixed Format report modules that process date ranges in selection criteria, sorting and extraction logic.
- Ad Hoc report modules that evaluate the logical operators for "less than", "less than or equal to", "greater than", and "greater than or equal to". Also, software that performs the sorting of date acronyms will need to be modified.
- The modules that define the processing order of batch transactions where year is a key to the transaction.
- The modules that store and retrieve Critical Data Element transactions.
- The modules that build the record keys for processing multi-year archived emissions data.

Continued from "Year 2000 Pre-Notification" - Page 17

Geographic Common Subsystem

The GCS is not fully Year 2000 compliant. GCS is the AIRS subsystem of geographical/ pollutant, etc. codes and table files that support the other AIRS subsystems. It currently supports AQS and AFS. It will undergo some reprogramming to make it Year 2000 compliant primarily to support AFS into the 21st century. Those GCS modules used exclusively by AQS will be re-written as part of the AQS re-engineering project and do not need to employ an interim solution. Those software modules used to support AFS which do not already support a 4-digit year will be modified to implement the '50' rule.

The modules which will be modified in GCS deal with record aging and clean-up routines for report selection criteria and user statistics information. User statistics information deals with tracking activity in the other AIRS subsystems. In addition, date ranges available as selection criteria for user statistics retrievals will be modified to include the '50' rule.

Summary

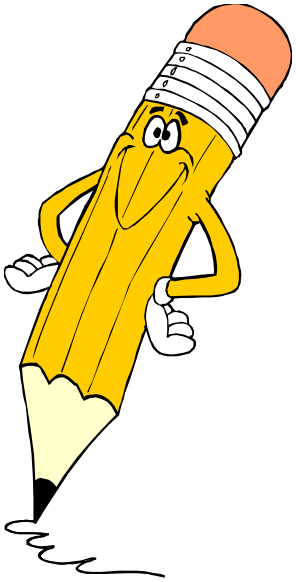
The AFS and GCS projects to implement the '50' rule are underway. The analysis phase is complete and the software development phase was started in September 1997. The scheduled completion date for the acceptance testing is early 1998. Then, after review by the EPA, the changes should be implemented in the production AFS and GCS systems in mid 1998.

States and locals should continue to report data to AIRS as usual. These systems and software changes will make AIRS ready for the 21st century.

If you have any questions or need additional information, please contact me at Bradley.Lillian@epamail.epa.gov or (919) 541-5694.

Reminder to Subscibe to AIRS-L List Server

by Bill Frietsche



Please consider subscribing to the AIRS-L listserver (it's free).

How do you subscribe to the AIRS-L listserver? You must be able to send Email over the internet. If you can do that, then all you need to do is send an email to the following: listserver@valley.rtpnc.epa.gov. The text of the message you send should read: subscribe AIRS-L <your full name>.

Once you have subscribed as shown above, you send Emails for distribution to the subscribed members to the following: AIRS-L@valley.rtpnc.epa.gov.

You can then send an E-Mail to every subscriber by sending only one E-Mail to the listserver. You will also receive a copy of every E-Mail sent to the listserver.

{END OF THE WINTER EDITION OF THE AIRSLETTER! - THANKS FOR READING!!!}